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## HISTORY OF RESERVOIRS ON UPPER PROVO RIVER

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Utah is a desert land, and only within about ten miles of major mountain ranges is there enough water to support a substantial population. Even there, near the mountains, the water must be collected and handled with care. The mountains capture water from the atmosphere primarily in the form of winter snow. In the springtime as the snow melts, the rivers run high, and there is water to irrigate farm land. Usually by the end of June most of the snow has melted, and streams rapidly dry up. Thus the warm months of July and August--the heart of the growing season--cannot be used for productive farming unless springtime water can be saved for later use.

Farmers from Heber first obtained late-season water by deepening the outlet channel of the most accessible large natural lake at the head of the Provo River. This worked well enough to be worth the effort, so the channel was dammed up again in order to repeat the operation the following year. This dam washed out the next spring. It was a primitive thing intended only to restore the two or three feet of depth that had been drained from the lake the year before. Nevertheless, it was an important trial dam, as it was called, and for want of any other name, the lake where this operation was first tried became known as the trial lake, and in time it became Trial Lake or, more formally, Lake Trial.

In 1889 the trial dam was rebuilt, substantially larger and stronger than before. At the same time Washington Lake was also dammed. Again the overflow requirements were underestimated, and both dams washed out in the spring of 1890. Salt Lake City interests protested rebuilding, and little more was done, except in the courts for twenty years. Provo City financed the litigation and acquired half of the water storage rights with most of the remainder going to the farmers of Heber Valley who pioneered the enterprise. When the suit was settled in 1910, four irrigation companies, already in business and operating canals to distribute Provo River water, joined forces and established the Union Reservoir Company to develop the newly secured water rights.

The first meeting of the Union Reservoir Company was held on June 2, 1910 in Provo. Those in attendance were:

Joseph R. Murdock, Pres.	Provo Reservoir Co.
James Clove, Pres.	Sego Irrigation Co.
John H. Clegg, Pres.	Wasatch Irrigation Co.
H. Moulton,	Timpanogos Irrigation Co.

The first two of these companies distributed water in Utah County, while the other two did so in Wasatch County. H. Moulton

was representing President Joseph Hatch of the Timpanogos Irrigation Co. Also present were Preston Peterson and Mr. Biersach of Sego and J.B. Keeler and J. William Knight of Brigham Young University.

Joseph R. Murdock was elected President of the new Union company. The first meeting dealt mainly with obtaining a loan. Each constituent company pledged securities. Clegg and Moulton were appointed to investigate and purchase implements necessary for work on a road.

Actually, work on a road had already started when on May 20, 1910, some six or eight men, including John Day (who had fought in the Boer war), Ed Perkins, and H. Cardwell (Cardie) Clegg left Heber with three teams of horses. This was a wagon road over which a team of two horses could pull a one-ton load and extended about twenty miles beyond other wagon roads. It was completed to Trial Lake on June 27. In many places the "building" consisted of no more than sawing and dragging away fallen trees. A few actual bridges were built, and long swampy stretches required laying logs side-by-side across the road in what was called corduroy construction. Tools were mainly saws, axes, crowbars, and chains.

In late July of 1910, three large crews, each with twenty five teams of horses, were put to work on three large dams. Various types of scrapers, particularly tongue scrapers, and dump wagons were used. Will Murdock was boss at Trial Lake, John H. Clegg at Washington Lake, and Homer Fraughton at Wall Lake. E.D. Clyde was superintendent of the whole operation.

Spillway requirements were still not fully understood, and the dams at Trial and Washington Lakes again washed out the following spring. Although the storage water was lost, the dams remained largely intact and were repaired in 1911 by a small crew who also revised the spillways. All three dams survived the spring runoff the next year and every year thereafter. Extensive work continued as the three dams were enlarged over the next several years. By the end of 1912, \$49,408 had been spent.

Two small cabins were built at Washington Lake suitable for summer shelter of cement and other commodities that must be kept dry. A larger cabin was provided at Trial Lake to permit limited winter living with stocks of "flour, bacon, beans, rice, sugar, powder, etc." The powder mentioned here could mean either baking powder or dynamite, as both were used. The dynamite was kept as a last-resort for clearing ice or timber jams from spillways.

George Clegg brought up the first live fish in 1912 when he planted one-inch trout in several of the lakes. By 1915 they had grown to twenty inches.

A telephone line reached Trial Lake in 1913, making it possible for an agent stationed there to regulate the flow of the Provo River according to the varying demands of farmers below.

In 1926 the road was improved enough that automobiles with adventurous drivers could get up as far as Trial Lake. The road was widened in the early 1930's by the Civilian Conservation Corps (CCC), so that cars going in opposite directions could pass nearly anywhere.

In addition to the three original large dams, many others were built on lakes which dotted both the Main and North Forks of the Provo River. Small--usually just sod--dams that could be built by one or two men in one or two days, could raise the level of a lake two or three feet. Minutes of a 1914 meeting of the Union Reservoir Co. tell of storage at that time in the Haystack Lake System, the North Fork Lakes, Diamond Lake, Star Lake, two Lily Lakes, two Lost Lakes, and Crystal Lake. At the close of 1916 "about a dozen pipes and headgates" were on hand for upgrading dams on the smaller lakes. The remains of some of these small dams can still be detected, sixty to seventy years after they were last used.

Many of the small dams were replaced by larger dams of more permanent structure. The last of these were the new dams on Crystal Lake and Island Lake, both built in 1939. After that, temporary dams were no longer used, and only the substantial earth-filled or masonry dams on fifteen lakes remained in service. All but one of these were made by the same basic methods with men and horses operating scrapers, wagons, and wheelbarrows. The one exception (before 1990) was the major operation at Lost Lake in 1931 when the dam and dike were both enlarged by use of motorized equipment including dump trucks and a steam shovel.

In 1986 a dike (not the big dam) on Trial Lake washed out releasing part of the storage water. It was decided to replace the old dam with one of modern design while replacing the dike. This was accomplished in 1990 at a cost of nearly one million dollars.